L Number	Hits	Search Text	DB	Time stamp
1	180	(562/899).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:44
2	56299	$cysteine	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:44
3	465	(562/556).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:44
4	1848195	selenium or Se	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45
5	626	(562/401).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45
6	28125	benzaldehyde	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45
7	0	((562/401).CCLS.) and methylselenocysteine	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:52
8	1720	selen?	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45
9	63790	selen$	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45
10	46889	Racemi$	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45
11	231748	amino adj acid	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45
12	17217	Racemi$ and (amino adj acid)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45
13	3027	selen$ and (Racemi$ and (amino adj acid))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45
14	0	selen? and 4401820.URPN.	USPAT	2004/03/30 06:45
15	232680	se	USPAT	2004/03/30 06:45
16	0	4401820.URPN. and se	USPAT	2004/03/30 06:45
17	9	((562/899).CCLS.) and $cysteine	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45
18	6	1205471.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45
19	56	((562/556).CCLS.) and (selenium or Se)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45
20	2	3678067.URPN.	USPAT	2004/03/30 06:45

21	2	4540792.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45
22	2	5360819.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45
23	3	9933785.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45
24	23	methylselenocysteine	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45
25	31	((562/401).CCLS.) and benzaldehyde	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45
26	15	"4401820"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45
27	3	((562/401).CCLS.) and (selen$ and (Racemi$ and (amino adj acid)))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45
28	4	4401820.PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45
29	11	4401820.URPN.	USPAT	2004/03/30 06:45
30	447	$selenocysteine	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:52
31	116980	triethylamine	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:53
33	2	$selenocysteine same triethylamine	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:53
32	35	$selenocysteine and triethylamine	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:57

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition
1	IS&R	L1	180	(562/899).CCLS.	USPAT; US-PG PUB; EPO; JPO; DERWENT	2004/03/30 06:44		
2	BRS	L2	56299	$cysteine	USPAT; US-PG PUB; EPO; JPO; DERWENT	2004/03/30 06:44		
3	IS&R	L3	465	(562/556).CCLS.	USPAT; US-PG PUB; EPO; JPO; DERWENT	2004/03/30 06:44		
4	BRS	L4	1848195	selenium or Se	USPAT; US-PG PUB; EPO; JPO; DERWENT	2004/03/30 06:45		
5	IS&R	L5	626	(562/401).CCLS.	USPAT; US-PG PUB; EPO; JPO; DERWENT	2004/03/30 06:45		
6	BRS	L6	28125	benzaldehyde	USPAT; US-PG PUB; EPO; JPO; DERWENT	2004/03/30 06:45		
7	BRS	L7	0	((562/401).CCLS.) and methylselenocysteine	USPAT; US-PG PUB; EPO; JPO; DERWENT	2004/03/30 06:52		

	Errors
1	0
2	0
3	0
4	0
5	0
6	0
7	0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition
8	BRS	L8	1720	selen?	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45		
9	BRS	L9	63790	selen$	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45		
10	BRS	L10	46889	Racemi$	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45		
11	BRS	L11	231748	amino adj acid	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45		
12	BRS	L12	17217	Racemi$ and (amino adj acid)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45		
13	BRS	L13	3027	selen$ and (Racemi$ and (amino adj acid))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45		
14	BRS	L14	0	selen? and 4401820.URPN.	USPAT	2004/03/30 06:45		
15	BRS	L15	232680	se	USPAT	2004/03/30 06:45		
16	BRS	L16	0	4401820.URPN. and se	USPAT	2004/03/30 06:45		
17	BRS	L17	9	((562/899).CCLS.) and $cysteine	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45		

	Errors
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition
18	BRS	L18	6	1205471.pn.	USPAT; US-PG PUB; EPO; JPO; DERWENT	2004/03/30 06:45		
19	BRS	L19	56	((562/556).CCLS.) and (selenium or Se)	USPAT; US-PG PUB; EPO; JPO; DERWENT	2004/03/30 06:45		
20	BRS	L20	2	3678067.URPN.	USPAT	2004/03/30 06:45		
21	BRS	L21	2	4540792.pn.	USPAT; US-PG PUB; EPO; JPO; DERWENT	2004/03/30 06:45		
22	BRS	L22	2	5360819.pn.	USPAT; US-PG PUB; EPO; JPO; DERWENT	2004/03/30 06:45		
23	BRS	L23	3	9933785.pn.	USPAT; US-PG PUB; EPO; JPO; DERWENT	2004/03/30 06:45		
24	BRS	L24	23	methylselenocysteine	USPAT; US-PG PUB; EPO; JPO; DERWENT	2004/03/30 06:45		
25	BRS	L25	31	((562/401).CCLS.) and benzaldehyde	USPAT; US-PG PUB; EPO; JPO; DERWENT	2004/03/30 06:45		

	Errors
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition
26	BRS	L26	15	"4401820"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45		
27	BRS	L27	3	((562/401).CCLS.) and (selen$ and (Racemi$ and (amino adj acid)))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45		
28	BRS	L28	4	4401820.PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:45		
29	BRS	L29	11	4401820.URPN.	USPAT	2004/03/30 06:45		
30	BRS	L30	447	$selenocysteine	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:52		
31	BRS	L31	116980	triethylamine	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:53		
32	BRS	L33	2	l30 same l31	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:53		
33	BRS	L32	35	l30 and l31	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/30 06:57		

	Errors
26	0
27	0
28	0
29	0
30	0
31	0
32	0
33	0

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS 1		Web Page URLs for STN Seminar Schedule - N. America
NEWS 2		"Ask CAS" for self-help around the clock
NEWS 3	SEP 09	CA/CAplus records now contain indexing from 1907 to the present
NEWS 4	DEC 08	INPADOC: Legal Status data reloaded
NEWS 5	SEP 29	DISSABS now available on STN
NEWS 6	OCT 10	PCTFULL: Two new display fields added
NEWS 7	OCT 21	BIOSIS file reloaded and enhanced
NEWS 8	OCT 28	BIOSIS file segment of TOXCENTER reloaded and enhanced
NEWS 9	NOV 24	MSDS-CCOHS file reloaded
NEWS 10	DEC 08	CABA reloaded with left truncation
NEWS 11	DEC 08	IMS file names changed
NEWS 12	DEC 09	Experimental property data collected by CAS now available in REGISTRY
NEWS 13	DEC 09	STN Entry Date available for display in REGISTRY and CA/CAplus
NEWS 14	DEC 17	DGENE: Two new display fields added
NEWS 15	DEC 18	BIOTECHNO no longer updated
NEWS 16	DEC 19	CROPU no longer updated; subscriber discount no longer available
NEWS 17	DEC 22	Additional INPI reactions and pre-1907 documents added to CAS databases
NEWS 18	DEC 22	IFIPAT/IFIUDB/IFICDB reloaded with new data and search fields
NEWS 19	DEC 22	ABI-INFORM now available on STN
NEWS 20	JAN 27	Source of Registration (SR) information in REGISTRY updated and searchable
NEWS 21	JAN 27	A new search aid, the Company Name Thesaurus, available in CA/CAplus
NEWS 22	FEB 05	German (DE) application and patent publication number format changes
NEWS 23	MAR 03	MEDLINE and LMEDLINE reloaded
NEWS 24	MAR 03	MEDLINE file segment of TOXCENTER reloaded
NEWS 25	MAR 03	FRANCEPAT now available on STN
NEWS 26	MAR 29	Pharmaceutical Substances (PS) now available on STN
NEWS 27	MAR 29	WPIFV now available on STN
NEWS 28	MAR 29	No connect hour charges in WPIFV until May 1, 2004
NEWS 29	MAR 29	New monthly current-awareness alert (SDI) frequency in RAPRA

NEWS EXPRESS	MARCH 5 CURRENT WINDOWS VERSION IS V7.00A, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 3 MARCH 2004
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
NEWS LOGIN	Welcome Banner and News Items
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
NEWS WWW	CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

result in loss of user privileges and other penalties.

* * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 07:19:27 ON 30 MAR 2004

=> file reg
COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 07:19:38 ON 30 MAR 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 29 MAR 2004 HIGHEST RN 668968-88-5
DICTIONARY FILE UPDATES: 29 MAR 2004 HIGHEST RN 668968-88-5

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

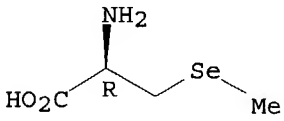
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

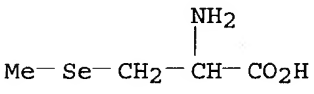
=> e methyl selenocysteine/cn
E1 1 METHYL SELENIUM PHOSPHORODITHIOATE (((MEO)2PS2)2SE)/CN
E2 1 METHYL SELENOBENZOATE/CN
E3 0 --> METHYL SELENOCYSTEINE/CN
E4 1 METHYL SELENONE/CN
E5 1 METHYL SELENOXIDE/CN
E6 1 METHYL SELENOXIDE, COMPD. WITH CADMIUM CHLORIDE (2:1)/CN
E7 1 METHYL SELENOXIDE, COMPD. WITH COBALT CHLORIDE (COCL2) (2:1)
/CN
E8 1 METHYL SELENOXIDE, COMPD. WITH COPPER CHLORIDE (CUCL2) (2:1)
/CN
E9 1 METHYL SELENOXIDE, COMPD. WITH MERCURY CHLORIDE (HGCL2) (1:1
)/CN
E10 1 METHYL SELENOXIDE, COMPD. WITH NICKEL BROMIDE (NIBR2) (3:2)/
CN
E11 1 METHYL SELENOXIDE, COMPD. WITH NICKEL CHLORIDE (NICL2) (3:2)
/CN
E12 1 METHYL SELENOXIDE, COMPD. WITH NITROGEN OXIDE (N2O4) (1:1)/C
N

=> e methylselenocysteine/cn
E1 1 METHYLSELENOCYANATE/CN
E2 1 METHYLSELENOCYANIDE/CN
E3 2 --> METHYLSELENOCYSTEINE/CN
E4 1 METHYLSELENOL/CN
E5 1 METHYLSELENOMAGNESIUM BROMIDE/CN
E6 1 METHYLSELENOMAGNESIUM IODIDE/CN
E7 1 METHYLSELENOMETHIONINE/CN
E8 1 METHYLSELENOMETHYLLITHIUM/CN
E9 1 METHYLSELENYL CHLORIDE/CN

```
E10             1      METHYLSELONOCHOLINE/CN
E11             1      METHYLSEMISQUARIC ACID ION(1-)/CN
E12             1      METHYLSILAISONITRILE/CN

=> e3
L1              2 METHYLSELENOCYSTEINE/CN

=> d l1 1-2

L1   ANSWER 1 OF 2  REGISTRY  COPYRIGHT 2004 ACS on STN
RN   26046-90-2  REGISTRY
CN   L-Alanine, 3-(methylseleno)- (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   Alanine, 3-(methylselenyl)-, L- (8CI)
OTHER NAMES:
CN   3-(Methylseleno)-L-alanine
CN   Methylseleno-L-cysteine
CN   Methylselenocysteine
CN   Se-Methylselenocysteine
FS   STEREOSEARCH
MF   C4 H9 N O2 Se
LC   STN Files:   AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS, CA, CAPLUS, CASREACT,
       CHEMCATS, CSCHEM, DDFU, DRUGU, TOXCENTER, USPATFULL
         (*File contains numerically searchable property data)

Absolute stereochemistry.
```




```
**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

              82 REFERENCES IN FILE CA (1907 TO DATE)
              82 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L1   ANSWER 2 OF 2  REGISTRY  COPYRIGHT 2004 ACS on STN
RN   2574-71-2  REGISTRY
CN   Alanine, 3-(methylseleno)- (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   Alanine, 3-(methylselenyl)- (6CI, 7CI, 8CI)
OTHER NAMES:
CN   DL-Se-methylselenocysteine
CN   Methylselenocysteine
CN   NSC 319053
CN   Selenocysteine, Se-methyl-
DR   26145-42-6
MF   C4 H9 N O2 Se
LC   STN Files:   AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS, CA, CANCERLIT, CAOLD,
       CAPLUS, CHEMCATS, MEDLINE, TOXCENTER
         (*File contains numerically searchable property data)
```



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

34 REFERENCES IN FILE CA (1907 TO DATE)
34 REFERENCES IN FILE CAPLUS (1907 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	8.81	9.02

FILE 'CAPLUS' ENTERED AT 07:20:52 ON 30 MAR 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 30 Mar 2004 VOL 140 ISS 14
FILE LAST UPDATED: 29 Mar 2004 (20040329/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> l1
L2 114 L1

=> ?ylamine
L3 328550 ?YLAMINE

=> l2 and l3
L4 3 L2 AND L3

=> d 1-3 ti fbib abs

L4 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN
TI Studies on the stabilities of bio-active selenocompounds in selenium-enriched garlic and onion
AN 2003:227808 CAPLUS
DN 139:35523
TI Studies on the stabilities of bio-active selenocompounds in selenium-enriched garlic and onion
AU Yang, Wenjie
CS Institute of Nutrition and Food Hygiene, Chinese Academy of Preventive Medicine, Beijing, 100050, Peop. Rep. China
SO Weisheng Yanjiu (2002), 31(4), 252-254, 255
CODEN: WEYAEM; ISSN: 1000-8020
PB Weisheng Yanjiu Bianjibu
DT Journal
LA Chinese
AB It is reported that selenium(Se) incorporation into garlic increases the bioactivities of garlic. Hence, the chemical changes of selenocompounds during processing and storage will influence the bioactive effectiveness

of Se-enriched garlic. The principal selenocompounds in Se-enriched garlic are water-soluble, and several comparative expts. were conducted to examine the stabilities of the selenocompounds in water exts. of Se-enriched garlic and Se-enriched onion. The results showed that preparing the garlic powder by freeze-drying technique could maintain the chemical properties of the selenium compds. in Se-enriched garlic. Se-methyl-selenocysteine was unstable in water extract of Se-enriched garlic when the extract is prepared and stored at room temperature Specific alliinase inhibitor **hydroxylamine** (NHOH HCl) effectively prevents the loss of Se-methyl-selenocysteine, which suggests that the decomposition of Se-methyl-selenocysteine may be catalyzed by alliinase. Se-methyl-selenocysteine was one of the main bioactive selenocompounds in Se-enriched garlic. The procedures of processing and storage should be carefully chosen to prevent the loss of selenocompounds and the decrease of the bioactivity of Se-enriched garlic. Se-enriched onion also contains alliinase and Se-methyl- selenocysteine, but its Se-methyl-selenocysteine is proved to be stable in the same water extract as that of Se-enriched garlic. The stability differences of Se-methyl-selenocysteine in Se-enriched garlic and onion, the mechanism of selenocompound decomposition and the bioactivities of decomposed compds. in Se-enriched garlic need to be further studied.

L4 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN
TI Selenoxidation by Flavin-Containing Monooxygenases as a Novel Pathway for β-Elimination of Selenocysteine Se-Conjugates
AN 2001:84596 CAPLUS
DN 134:275447
TI Selenoxidation by Flavin-Containing Monooxygenases as a Novel Pathway for β-Elimination of Selenocysteine Se-Conjugates
AU Rooseboom, Martijn; Commandeur, Jan N. M.; Floor, Gerrit C.; Rettie, Allan E.; Vermeulen, Nico P. E.
CS Leiden/Amsterdam Center for Drug Research (LACDR) Division of Molecular Toxicology Department of Pharmacochemistry, Vrije Universiteit, Amsterdam, 1081 HV, Neth.
SO Chemical Research in Toxicology (2001), 14(1), 127-134
CODEN: CRTOEC; ISSN: 0893-228X
PB American Chemical Society
DT Journal
LA English
AB Previously, it was shown that β-elimination of selenocysteine Se-conjugates by rat renal cytosol leading to pyruvate formation was not solely catalyzed by pyridoxal phosphate-dependent enzymes. It was hypothesized that selenoxidn. of the selenocysteine Se-conjugates, followed by syn-elimination, may be an alternative mechanism for pyruvate formation. In this study, selenoxidn. of selenocysteine Se-conjugates was studied using rat liver microsomes and recombinant human oxidative enzymes. For all six selenocysteine Se-conjugates that were tested, it was found that rat liver microsomal incubations led to the formation of pyruvate, whereas the corresponding selenoxides were not observed Microsomal pyruvate formation from Se-benzyl-L-selenocysteine (SeBC) was NADPH-dependent, but only marginally inhibited by several P 450 inhibitors. Inhibition by methimazole and by heat pretreatment and stimulation by n-**octylamine** indicated that flavin-containing monooxygenases are mainly responsible for pyruvate formation from the selenocysteine Se-conjugates in rat liver microsomes. In the case of S-benzyl-L-cysteine, the sulfur analog of SeBC, pyruvate formation was not observed For this substrate, a chemical stable sulfoxide could be observed, as previously described. By using recombinantly expressed human flavin-containing monooxygenases and P 450 enzymes, it was delineated that SeBC is selenoxidized by human FMOs, but not by human P450s. The kcat/Km of selenoxidn. was 3.8-fold higher for FMO-1 than for FMO-3. In conclusion, selenoxidn. of selenocysteine Se-conjugates catalyzed by FMOs and subsequently syn-elimination has taken place as an alternative route for the formation of pyruvate from selenocysteine Se-conjugates. Although

selenoxides are known to be easily reduced by thiol compds., microsomal pyruvate formation from SeBC was only 75% inhibited in the presence of an excess of glutathione. This indicates that even in the presence of physiol. concns. of reducing thiol compds., selenoxides of selenocysteine Se-conjugates may undergo syn-elimination to some extent. Whether selenoxides and/or selenenic acids that are formed are involved in the activity of chemopreventive selenocysteine Se-conjugates remains to be established.

RE.CNT 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN
TI The C3-N bond cleavage of 2-amino-3-(N-substituted-amino)-propionic acids catalyzed by L-methionine γ-lyase
AN 1989:91177 CAPLUS
DN 110:91177
TI The C3-N bond cleavage of 2-amino-3-(N-substituted-amino)-propionic acids catalyzed by L-methionine γ-lyase
AU Takada, Harumi; Esaki, Nobuyoshi; Tanaka, Hidehiko; Soda, Kenji
CS Inst. Chem. Res., Kyoto Univ., Uji, 611, Japan
SO Agricultural and Biological Chemistry (1988), 52(11), 2897-901
CODEN: ABCHA6; ISSN: 0002-1369
DT Journal
LA English
AB L-Methionine γ-lyase (EC 4.4.1.11) catalyzes α,β-elimination of L-2-amino-3-(N-methylamino)propionic acid and L-2-amino-3-(N-hydroxyethylamino)propionic acid to yield pyruvate, NH3, and the corresponding amines. These amino acids also undergo the enzymic β-replacement reaction with thiols to produce the corresponding S-substituted cysteines. Thus, L-methionine γ-lyase cleaves a C-N bond in addition to C-S, C-Se, and C-O bonds at the β position of amino acids by elimination and replacement reactions. A linear relationship between the reactivity, (Vmax/Km) and the pKa value of the conjugated acid of the leaving group has been found for Se-methyl-L-selenocysteine, S-methyl-L-cysteine, and O-methyl-L-serine. However, L-2-amino-3-(N-methylamino)propionic acid has shown lower reactivity than that expected from the pKa value of methylammonium ions.

=> l1/prep
114 L1
3128003 PREP/RL
L5 10 L1/PREP
(L1 (L) PREP/RL)

=> d l5 1-10 ti

L5 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
TI Soil methylation-demethylation pathways for metabolism of plant-derived selenoamino acids

L5 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
TI A method of using synthetic L-Se-methylselenocysteine as a nutriceutical

L5 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
TI Chemoprevention of mammary cancer with Se-Allylselenocysteine and other selenoamino acids in the rat

L5 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
TI Synthesis and structure characterization of selenium metabolites

L5 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
TI Synthesis of Novel Se-Substituted Selenocysteine Derivatives as Potential Kidney Selective Prodrugs of Biologically Active Selenol Compounds:

Evaluation of Kinetics of β-Elimination Reactions in Rat Renal Cytosol

L5 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
TI Chemical form of selenium, critical metabolites, and cancer prevention

L5 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
TI Preparation of sulfur and selenium amino acids with microbial pyridoxal phosphate enzymes

L5 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
TI Selenium-containing amino acids

L5 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
TI Enzymatic synthesis of selenium-substituted L-selenocysteine with tryptophan synthase

L5 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
TI Selenoamino acids

=> d l5 1-10 ti fbib abs

L5 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
TI Soil methylation-demethylation pathways for metabolism of plant-derived selenoamino acids
AN 2002:947285 CAPLUS
DN 138:136504
TI Soil methylation-demethylation pathways for metabolism of plant-derived selenoamino acids
AU Martens, Dean A.; Suarez, Donald L.
CS Southwest Watershed Research Center, Agricultural Research Service, U.S. Department of Agriculture, Tucson, AZ, 85719, USA
SO ACS Symposium Series (2003), 835(Biogeochemistry of Environmentally Important Trace Elements), 355-369
CODEN: ACSMC8; ISSN: 0097-6156
PB American Chemical Society
DT Journal
LA English
AB There is conflicting field information about Se toxicity in waterfowl and fish, based on criteria of total Se concentration At least part of this uncertainty is due to the difference in toxicity associated with various Se species. There is toxicity data on the selenoamino acid selenomethionine (SeMet) to avian species, but little is known on the environmental transformations of SeMet and the possible intermediates of organic Se decomposition To determine the potential decomposition of Se amino acids, methylation and demethylation pathway intermediates for the transformations of sulfur (S) amino acids, identified from aerobic marine sediments, were compared to potential analog Se intermediates synthesized for this study. Two terrestrial soils with apparently different pathways for metabolizing SeMet were treated with 25 μg S intermediate-S g-1 soil and the soil headspace analyzed for the methylation pathway gas dimethylsulfide (DMS) or the demethylation pathway gas dimethyldisulfide (DMDS). Addition of S-methylmethionine (MMet), and dimethylsulfoniopropionic acid (DMSP) to the Panhill and Panoche soils resulted in only DMS evolution; addition of 3-(methylthio)propionic acid (MTP) resulted in DMDS in the soils and 3-mercaptopropionic acid (MCP) addition was not volatilized confirming that terrestrial soil S pathways are similar to documented marine pathways. The Panhill soil evolved only DMDS as a result of the methionine (Met) demethylation pathway and the Panoche soil evolved only DMS from the methylation of Met. The evolution of Se gases dimethylselenide (DMSe) and dimethyldiselenide (DMDSe) from addition of SeMet, methylselenomethionine (MSeMet), and dimethylselenopropionic acid (DMSeP) followed the same

pattern as noted with the S products. DMSe evolved from a methylation pathway and DMDSe evolved from a demethylation metabolism Selenocystine (SeCys) and a methylated selenocysteine (MSeCys) added to the two soils showed limited volatilization as DMSe. A large portion of the Se not volatilized from soil was found as a non-amino acid organic selenide compound(s) and these unidentified intermediate compds. may be present in significant concns. in some environments. The different metabolic pathways of Se in soils may explain why in certain waterfowl areas Se-induced problems have not been found where predicted based on total Se concns.

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
TI A method of using synthetic L-Se-methylselenocysteine as a nutriceutical
AN 2002:364013 CAPLUS
DN 136:369993
TI A method of using synthetic L-Se-methylselenocysteine as a nutriceutical
IN Spallholz, Julian E.; Reid, Ted W.; Walkup, Robert D.
PA Pharmase, Incorporated, USA
SO Eur. Pat. Appl., 21 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1205471	A1	20020515	EP 2001-103018	20010208
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
				US 2000-677563 A	20001002
	EP 1077209	A1	20010221	EP 2000-117106	20000809
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
				US 1999-376073 A	19990816
	US 2003083383	A1	20030501	US 2002-288024	20021105
				US 1999-376073 B2	19990816
				US 2000-677563 A3	20001002

OS CASREACT 136:369993
AB The invention describes the synthesis and use of L-Se-methylselenocysteine (I), a nutriceutical which is less toxic than L-selenomethionine towards normal cells. The synthesis involves mixing N-(tert-butoxycarbonyl)-L-serine with a dialkyl diazodicarboxylate and at least one of a trialkylphosphine, triarylphosphine and phosphite to form a mixture containing N-(tert-butoxycarbonyl)-L-serine β-lactone, addition of methylselenol or a salt, and deprotection. This synthesis significantly improves the manufacturing efficiency and utility I., a naturally occurring rare form of organic selenium. I formed in this manner may be used as a nutriceutical in the diets of humans or animals for various beneficial purposes, such as, for example, to prevent or reduce the risk of developing cancer. A bar graph which compares the effect of I and L-selenomethionine on the growth of normal rabbit fibroblasts is given.
RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
TI Chemoprevention of mammary cancer with Se-Allylselenocysteine and other selenoamino acids in the rat
AN 2000:69937 CAPLUS
DN 132:307715
TI Chemoprevention of mammary cancer with Se-Allylselenocysteine and other selenoamino acids in the rat
AU Ip, Clement; Zhu, Zongjian; Thompson, Henry J.; Lisk, Donald; Ganther,

Howard E.
CS Department of Experimental Pathology, Roswell Park Cancer Institute, Buffalo, NY, 14263, USA
SO Anticancer Research (1999), 19(4B), 2875-2880
CODEN: ANTRD4; ISSN: 0250-7005
PB International Institute of Anticancer Research
DT Journal
LA English
AB The present study examined the mammary cancer chemopreventive activity of Se-methylselenocysteine, Se-propylselenocysteine and Se-allylselenocysteine in the rat methylnitrosourea (MNU) model. Each compound was supplemented in the diet at a level of 2 ppm Se for the entire duration of the experiment after MNU dosing. Se-allylselenocysteine was the most active and caused a reduction in total tumor yield by 86%. Se-methylselenocyteine and Se-propylselenocysteine were similar but less effective, and both produced a decrease of about 50% in tumorigenesis. All 3 compds. were very well absorbed through the gastrointestinal tract. However, more Se was excreted in urine after gavaging with Se-propylselenocysteine or Se-allylselenocysteine compared with Se-methylselenocysteine. Anal. of Se in the mammary gland and other organs showed that tissue Se levels did not appear to be correlated with differences in chemopreventive activity. A lyase activity capable of catalyzing scission of the Se-alkyl group from the remainder of the amino acid was demonstrated. This activity was high in liver and kidney, but relatively low in mammary gland and intestine. Minimal variations in enzyme activity towards each of the substrates were observed These results support the concept that Se-alkylselenoamino acids could be used as precursors for delivering the Se-alkyl moiety and that intrinsic chemical differences in the Se-alkyl substituent of the test compds. are likely to be important determinants of their biol. effects.
RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
TI Synthesis and structure characterization of selenium metabolites
AN 1998:278784 CAPLUS
DN 129:64137
TI Synthesis and structure characterization of selenium metabolites
AU Fan, Teresa W. -M.; Lane, Andrew N.; Martens, Dean; Higashi, Richard M.
CS Department of Land, Air and Water Resources, University of California, Davis, CA, 95616-8627, USA
SO Analyst (Cambridge, United Kingdom) (1998), 123(5), 875-884
CODEN: ANALAO; ISSN: 0003-2654
PB Royal Society of Chemistry
DT Journal
LA English
AB The difficulty in determining trace-level organoseleno metabolites and the lack of com. available stds. have been major barriers to a mol.-level understanding of Se biogeochem., ecotoxicol. and nutrition, particularly in aquatic ecosystems. To overcome the problem, three important precursors of volatile alkyl selenides were synthesized, including dimethylselenonium propionate (DMSeP), which has only been postulated to exist in nature. A combination of 2-D multinuclear NMR, electro-spray MS and GC-MS methods was employed to identify DMSeP, methylselenomethionine and methylselenocysteine in synthetic prepns. without extensive clean-up. An alkaline hydroelimination test coupled with GC-MS anal. for the release pattern of di-Me selenide (DMSe) and di-Me diselenide (DMDSe) was developed for a diagnostic determination of the three products. The DMSe release
pattern of DMSeP confirmed the presence of a DMSeP-like compound in the biomass of 100 mg l-1 Se-treated Chlorella investigated previously. Silylation-GC-MS was tested for the determination of selenomethionine, selenocysteine and methylselenocysteine in a standard mixture with a detection limit of better than 1 pmol per 0.5 μl injection volume for

selenomethionine. This method was applied to the anal. of the acid digest of the proteinaceous fraction of the Chlorella culture. Selenomethionine was found to contain >70% of the protein-bound Se, although this constituted only a minor fraction of the total Se in the Chlorella biomass. These findings revealed the metabolic relationship between Se volatilization and selenomethionine incorporation into proteins. This knowledge is critical to advancement in Se biogeochem., ecotoxicol. and the development of in situ bioremediation schemes.

RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
TI Synthesis of Novel Se-Substituted Selenocysteine Derivatives as Potential Kidney Selective Prodrugs of Biologically Active Selenol Compounds: Evaluation of Kinetics of β-Elimination Reactions in Rat Renal Cytosol
AN 1996:241974 CAPLUS
DN 124:306525
TI Synthesis of Novel Se-Substituted Selenocysteine Derivatives as Potential Kidney Selective Prodrugs of Biologically Active Selenol Compounds: Evaluation of Kinetics of β-Elimination Reactions in Rat Renal Cytosol
AU Andreadou, Ioanna; Menge, Wiro M. P. B.; Commandeur, Jan N. M.; Worthington, Eduard A.; Vermeulen, Nico P. E.
CS Leiden Amsterdam Center for Drug Research, Vrije Universiteit Amsterdam, Amsterdam, 1081 HV, Neth.
SO Journal of Medicinal Chemistry (1996), 39(10), 2040-6
CODEN: JMCMAR; ISSN: 0022-2623
PB American Chemical Society
DT Journal
LA English
AB Eighteen Se-substituted selenocysteine derivs. were prepared as potential kidney selective prodrugs which can be activated by renal cysteine conjugate β-lyase to selenium-containing chemoprotectants or antitumor agents. Selenocysteine derivs. with aliphatic and benzylic Se-substituents were synthesized by reducing selenocystine to selenocysteine followed by a reaction with the corresponding alkyl and benzyl halogenides. Selenocysteine derivs. with aromatic Se-substituents were synthesized by reaction of β-chloroalanine with substituted phenylselenol compds., which were formed by reducing substituted di-Ph diselenides by NaBH4. The enzyme kinetic parameters (apparent Km and Vmax) of the β-elimination reaction of the selenocysteine conjugates were studied in rat renal cytosol. The results suggest that Se-substituted L-selenocysteine conjugates are extremely good substrates for renal cysteine conjugate β-lyases as indicated by low apparent Km and high Vmax values. The benzyl-substituted Se-conjugates appeared to be better substrates than the phenyl- and alkyl-substituted Se-conjugates. Corresponding L-cysteine S-conjugates were too poor substrates to obtain proper enzyme kinetics. Recently, local activation of cysteine S-conjugates by renal cysteine conjugate β-lyases was proposed as a new strategy to target antitumor agents to the kidney. Se-substituted selenocysteine conjugates may be more promising prodrugs because these are much better substrates for β-lyase.

L5 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
TI Chemical form of selenium, critical metabolites, and cancer prevention
AN 1991:135663 CAPLUS
DN 114:135663
TI Chemical form of selenium, critical metabolites, and cancer prevention
AU Ip, Clement; Hayes, Cassandra; Budnick, Rose Marie; Ganther, Howard E.
CS Dep. Breast Surg., Roswell Park Cancer Inst., Buffalo, NY, 14263, USA
SO Cancer Research (1991), 51(2), 595-600
CODEN: CNREA8; ISSN: 0008-5472
DT Journal

LA English
AB Methylated selenides are prominent metabolites at the dietary levels used for obtaining anticarcinogenic effects with selenium. The present study reports the chemopreventive activities of 2 novel selenium compds. Se-methylselenocysteine and di-Me selenoxide, in the rat dimethylbenz(a)anthracene-induced mammary tumor model. Other treatment groups were supplemented with either selenite or selenocystine for comparative purposes. Each selenium compound was tested at different levels and was given to the animal starting 1 wk before dimethylbenz(a)anthracene administration and continued until sacrifice. Results of the carcinogenesis expts. showed that the relative efficacy with the four compds. was Se-methylselenocysteine > selenite > selenocystine > di-Me selenoxide. In correlating the chemical form and metabolism of these selenium compds. with their anticarcinogenic activity, it is concluded that: (a) selenium compds. that are able to generate a steady stream of methylated metabolites, particularly the monomethylated species, are likely to have good chemopreventive potential; (b) anticarcinogenic activity is lower for selenoamino acids, such as selenocysteine following conversion from selenocystine, which have an escape mechanism via random, nonstoichiometric incorporation into proteins; and (c) forms of selenium, as exemplified by dimethylselenoxide, which are metabolized rapidly and quant. to di-Me selenide and trimethylselenonium and excreted, are likely to be poor choices. A sep. bioavailability study using Se-methylseneocysteine, di-Me selenoxide, and trimethylselenonium as the starting compds. for delivering selenium with one, two, or three Me groups was undertaken and the ability of these compds. to restore glutathione peroxidase activity in selenium-depleted animals was measured. All three compds. were able to fully replete this enzyme, although with a wide range of efficiency (Se-methylselenocysteine > dmethyl selenoxide > trimethylselenonium), suggesting that complete demethylation to inorg. selenium is a normal process of selenium metabolism However, the degree to which this occurs under chemoprevention conditions would argue against the involvement of selenoproteins in the anticarcinogenic action of these selenium compds.

L5 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
TI Preparation of sulfur and selenium amino acids with microbial pyridoxal phosphate enzymes
AN 1988:128044 CAPLUS
DN 108:128044
TI Preparation of sulfur and selenium amino acids with microbial pyridoxal phosphate enzymes
AU Esaki, Nobuyoshi; Soda, Kenji
CS Inst. Chem. Res., Kyoto Univ., Uji, 611, Japan
SO Methods in Enzymology (1987), 143(Sulfur Sulfur Amino Acids), 291-7
CODEN: MENZAU; ISSN: 0076-6879
DT Journal
LA English
AB The preparation of S-substituted L-homocysteines with L-methionine γ-lyase (I), S-substituted L-cysteines and Se-substituted L-selenocysteines with tryptophan synthase, L-selenocystine and -homocystine with O-acetylhomoserine sulfhydrylase, and deuterated and tritiated L-methionine and S-methyl-L-cysteine with I are illustrated.

L5 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
TI Selenium-containing amino acids
AN 1984:4789 CAPLUS
DN 100:4789
TI Selenium-containing amino acids
PA Mitsui Toatsu Chemicals, Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DT Patent
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 58146286	A2	19830831	JP 1982-28108	19820225
	JP 02054076	B4	19901120		
				JP 1982-28108	19820225

AB A composition containing methaneselenol [6486-05-1] or benzylselenol [16645-12-8] and L-serine [56-45-1] is treated with tryptophan synthetase [9014-52-2] to produce Se-methylselenocysteine [26046-90-2] or Se-benzylselenocysteine [2575-74-8]. Thus, a composition containing L-serine 30, methaneselenol 50, pyridoxal phosphate 0.01 mM, and tryptophan synthetase 10 mg/dL was shaken at 30° for 24 h. The medium contained Se-methylselenocysteine with a mol. yield rate of 28%.

L5 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
TI Enzymatic synthesis of selenium-substituted L-selenocysteine with tryptophan synthase
AN 1983:590469 CAPLUS
DN 99:190469
TI Enzymatic synthesis of selenium-substituted L-selenocysteine with tryptophan synthase
AU Esaki, Nobuyoshi; Tanaka, Hidehiko; Miles, Edith W.; Soda, Kenji
CS Inst. Chem. Res., Kyoto Univ., Uji, 611, Japan
SO FEBS Letters (1983), 161(2), 207-9
CODEN: FEBLAL; ISSN: 0014-5793
DT Journal
LA English
AB When L-serine was incubated with the purified α2β2 complex of tryptophan synthase (EC 4.2.1.20) from Escherichia coli in the presence of a standard reaction mixture containing α-tolueneselenol, Se-benzyl-L-5-selenocysteine was formed with a yield of 44%, based on the L-serine used. The product was identified by several physicochem. criteria, including NMR. L-Serine was also converted to Se-methyl-L-selenocysteine by this method with methaneselenol as a reactant. The yield was 16%, based on L-serine. The reactivities of selenols were compared to those of thiols in a reaction system in which L-serine was used as a substrate. The specific activities of tryptophan synthase in β-replacement reactions with α-tolueneselenol and methaneselenol were 0.96 and 0.77, resp., whereas those with α-toluenethiol and methanethiol were 3.2 and 0.61, resp. Possible reasons for these reactivities are discussed.

L5 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
TI Selenoamino acids
AN 1979:522166 CAPLUS
DN 91:122166
TI Selenoamino acids
IN Sayuda, Kenji; Tanaka, Hidehiko
PA Ajinomoto Co., Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 54052033	A2	19790424	JP 1977-117664	19770929
	JP 57008717	B4	19820217		
				JP 1977-117664	19770929

AB Eight selenoamino acids RSe(CH2)nCH(NH2)CO2H (R = organic residues; n = 1, 2) were prepared by reaction of R1(CH2)nCH(NH2)CO2H [R1 = halo, R2O (R2 = H, alkyl), R2S, R2SO, R2SO2] with RSeH in aqueous media in the presence of methioninase. Thus, Pseudomonas ovalis IFO 3738 was cultured on 1 kg of broth (pH 7.2) containing L-methionine 0.25, urea 0.1, peptone 0.1, glycerol

0.1, KH2PO4 0.1, K2HPO4 0.1, MgSO4.7H2O 0.01, and yeast extract 0.025 g/dL 18 h at 28° to give 2.2 kg cells, which were crushed in H3PO4 buffer and the supernatant treated on DEAE-cellulose and Sephadex G-200 to give 280 mg enzyme protein. A mixture of 0.1M L-methionine (in 0.2M H3PO4 buffer at pH 8.0), 0.1 mL 1M PhSeH (in EtOH), 0.5 mL 10-5M pyridoxal phosphate (in 0.02M H3PO4 buffer at pH 8.0), and 1 mL of the enzyme liquid (50 μg of protein/mL) was kept for 2 h at 37° under N with addition of 3 + 200 μL of the enzyme liquid and 3 + 100 μL the PhSeH liquid and the whole kept 25 min at 100° to give 4.3 mg γ-phenylseleno-α-aminobutyric acid [71128-79-5].

=> ?amine
L6 1343223 ?AMINE

=> l5 and l6
L7 0 L5 AND L6

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	45.57	54.59

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-9.01	-9.01

FILE 'REGISTRY' ENTERED AT 07:26:06 ON 30 MAR 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 29 MAR 2004 HIGHEST RN 668968-88-5
DICTIONARY FILE UPDATES: 29 MAR 2004 HIGHEST RN 668968-88-5

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> e methylselenocysteine hydrochloride/cn

E1	1	METHYLSELENOCYANIDE/CN
E2	2	METHYLSELENOCYSTEINE/CN
E3	0 -->	METHYLSELENOCYSTEINE HYDROCHLORIDE/CN
E4	1	METHYLSELENOL/CN
E5	1	METHYLSELENOMAGNESIUM BROMIDE/CN
E6	1	METHYLSELENOMAGNESIUM IODIDE/CN
E7	1	METHYLSELENOMETHIONINE/CN
E8	1	METHYLSELENOMETHYLLITHIUM/CN
E9	1	METHYLSELENYL CHLORIDE/CN
E10	1	METHYLSELONOCHOLINE/CN
E11	1	METHYLSEMISQUARIC ACID ION(1-)/CN
E12	1	METHYLSILAISONITRILE/CN

```
=> triethylamine
          4495 TRIETHYLAMINE
             1 TRIETHYLAMINES
L8        4495 TRIETHYLAMINE
                (TRIETHYLAMINE OR TRIETHYLAMINES)

=> file caplus
COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       7.37      61.96

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)            SINCE FILE      TOTAL
                                                         ENTRY    SESSION
CA SUBSCRIBER PRICE                                       0.00      -9.01

FILE 'CAPLUS' ENTERED AT 07:30:01 ON 30 MAR 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)
```



```
FILE COVERS 1907 - 30 Mar 2004  VOL 140 ISS 14
FILE LAST UPDATED: 29 Mar 2004  (20040329/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.


=> d his

     (FILE 'HOME' ENTERED AT 07:19:27 ON 30 MAR 2004)

     FILE 'REGISTRY' ENTERED AT 07:19:38 ON 30 MAR 2004
               E METHYL SELENOCYSTEINE/CN
               E METHYLSELENOCYSTEINE/CN
L1             2 E3

     FILE 'CAPLUS' ENTERED AT 07:20:52 ON 30 MAR 2004
L2           114 L1
L3        328550 ?YLAMINE
L4             3 L2 AND L3
L5            10 L1/PREP
L6       1343223 ?AMINE
L7             0 L5 AND L6

     FILE 'REGISTRY' ENTERED AT 07:26:06 ON 30 MAR 2004
               E METHYLSELENOCYSTEINE HYDROCHLORIDE/CN
L8          4495 TRIETHYLAMINE

     FILE 'CAPLUS' ENTERED AT 07:30:01 ON 30 MAR 2004

=> l2 and l8
          37073 L8
L9             1 L2 AND L8
```

=> d l9 ti fbib abs

L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN
TI Allium chemistry: synthesis, natural occurrence, biological activity, and chemistry of Se-alk(en)ylselenocysteines and their γ-glutamyl derivatives and oxidation products
AN 2000:889773 CAPLUS
DN 134:172682
TI Allium chemistry: synthesis, natural occurrence, biological activity, and chemistry of Se-alk(en)ylselenocysteines and their γ-glutamyl derivatives and oxidation products
AU Block, Eric; Birringer, Marc; Jiang, Weiqin; Nakahodo, Tsukasa; Thompson, Henry J.; Toscano, Paul J.; Uzar, Horst; Zhang, Xing; Zhu, Zongjian
CS Department of Chemistry, State University of New York-Albany, Albany, NY, 12222, USA
SO Journal of Agricultural and Food Chemistry (2001), 49(1), 458-470
CODEN: JAFCAU; ISSN: 0021-8561
PB American Chemical Society
DT Journal
LA English
OS CASREACT 134:172682
AB Syntheses are reported for γ-glutamyl Se-methylselenocysteine (8a), selenolanthionine (16), Se-1-propenylselenocysteine (6d), Se-2-methyl-2-propenyl-L-selenocysteine (6e), and Se-2-propynyl-L-selenocysteine (6f). Oxidation of 8a and Se-methylselenocysteine (6a) gives methaneseleninic acid (24), characterized by X-ray crystallog., and di-Me diselenide (25). Oxidation of Se-2-propenyl-L-selenocysteine (6c) gives allyl alc. and 3-seleninoalanine (22). Compound 22 is also formed on oxidation of 16 and selenocystine (4). Oxidation of 6d gives 2-[(E,Z)-1-propenylseleno]propanal (36). These oxidns. occur by way of selenoxides, detected by chromatog. and spectroscopic methods. The natural occurrence of many of the Se-alk(en)ylselenocysteines and their γ-glutamyl derivs. and oxidation products is discussed. Three homologues of the potent cancer chemoprevention agents 6a and 6c, namely 6d-f, were evaluated for effects on cell growth, induction of apoptosis, and DNA-damaging activity using two murine mammary epithelial cell lines. Although each compound displays a unique profile of activity, none of these compds. (6d-f) is likely to exceed the chemopreventive efficacy of selenocysteine Se-conjugates 6a and 6c.
RE.CNT 75 THERE ARE 75 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=>
Connection closed by remote host